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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/649,686	08/28/2003	Toshikatsu Hosoi	Q77108	5666

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EXAMINER

RIVERO, ALEJANDRO

ART UNIT	PAPER NUMBER
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2618

DATE MAILED: 05/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/649,686	Applicant(s) HOSOI, TOSHIKATSU	
	Examiner Alejandro Rivero	Art Unit 2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 August 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. Applicant is reminded of the proper language and format for an abstract of the disclosure. The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details. The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The abstract of the disclosure is objected to because is not limited to a single paragraph. Correction is required. See MPEP § 608.01(b).

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: METHOD FOR POWER CONSERVATION IN A MOBILE TELEPHONE DEVICE USING VARIABLE SYNCHRONIZING SIGNAL.

3. The disclosure is objected to because of the following informalities:

In line 3 of page 1, replace "INEVENTION" with "INVENTION".

In line 11 of page 11, replace "signal 15 and a timer interrupt signal 16" with "signal 16 and a timer interrupt signal 15".

In line 22 of page 15, replace "signal 9" with "signal 59".

In line 23 of page 18, replace "flip-flop 1" with "flip-flop 101".

Appropriate correction is required.

Drawings

4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 23 (in figures 1 & 2). The drawings are also objected to because of the following informalities: in S401 of figure 4 replace "NUTNBER" with "NUMBER". Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 2, 4 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Inoue (US 2002/0004413 A1).

Consider claim 1, Inoue discloses a mobile telephone device (Abstract, paragraph [0008]) comprising; a central processing unit (Abstract, element 21 of figure 2); a display controller (Paragraphs [0015] and [0028], element 25 of figure 2); a display (Paragraph [0014], element 34 of figure 1A); and a volatile memory shared by said central processing unit and said display controller via a bus (Paragraphs [0054] and [0061], where Inoue discloses a RAM and frame memory); wherein said central processing unit operates in sync with a variable synchronizing signal (Paragraphs [0041]-[0042]); and wherein said display and said display controller operate in sync with a fixed (base) synchronizing signal (Paragraph [0061]).

Consider claim 2, Inoue discloses all the limitations as applied to claim 1 above and also discloses wherein said display controller voluntarily reads data out of said volatile memory at regular intervals (Paragraph [0065], where Inoue discloses refreshing the display automatically).

Consider claim 4, Inoue discloses all the limitations as applied to claim 1 above and also discloses wherein said variable synchronizing signal (clock) is set at a lower

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frequency than a frequency in a normal operating state in the absence of operator's operation (stand-by), and is returned to the frequency in the normal operating state in response to operator's operation (out of stand-by) (Paragraphs [0079]-[0080]).

Consider claim 5, Inoue discloses all the limitations as applied to claim 1 above and also discloses wherein said display controller reads out of said volatile memory in a predetermined cycle of time voluntarily (Paragraph [0065], where Inoue discloses a refresh rate).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. Claims 3 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inoue in view of Son et al. (US 6,278,887 B1).

Consider claims 3 and 6, Inoue discloses all the limitations as applied to claims 2 and 5 above and also discloses illumination means switchable between on and off for

illuminating said display (Paragraph [0058]); and illumination control means for controlling said illumination means (Paragraph [0058], elements 21 and 36 of figure 2).

However, Inoue does not disclose said illumination control means including means for putting said illumination means out after a given period of time.

Son et al. disclose said illumination control means including means for putting said illumination means out after a given period of time (Abstract, column 2 lines 62-66).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to include illumination control means including means for putting said illumination means out after a given period of time as taught by Son et al. in the method of Inoue in order to conserve battery power (as suggested by Son et al. in column 2 lines 54-61).

10. Claims 7-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inoue in view of Kayada et al. (US 2002/0190943 A1).

Consider claim 7, Inoue discloses a method of controlling display images of a mobile telephone device (Abstract, paragraph [0008]), comprising: a normal processing step of performing application processing (Paragraph [0051]); an image display step of refreshing an image display (Paragraph [0065]); an input supervisory step of determining the presence or absence of an external input (Paragraphs [0044] and [0046]); a variable synchronizing signal adjusting step of changing a variable synchronizing signal which functions as a criterion when said input supervisory step performs application processing of an external input (Paragraph [0044]); wherein said image display step performs the image display processing via a bus, using the display

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data stored in a volatile memory via said bus (Paragraphs [0054] and [0061], where Inoue discloses a RAM and frame memory).

However, Inoue does not disclose an arbitration step of arbitrating the use of a bus on the basis of priority if said normal processing step and said image display step conflict.

Kayada et al. disclose an arbitration step of arbitrating the use of a bus on the basis of priority if said normal processing step and said image display step conflict (Paragraphs [0159]-[0161]).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to include an arbitration step of arbitrating the use of a bus on the basis of priority if said normal processing step and said image display step conflict as taught by Kayada et al. in the method of Inoue for the purpose of effectively managing bus traffic by assigning bus resources since the both the LCD and the control unit will need access to memory and a bus arbiter resolves priority conflicts (as suggested by Kayada et al. in paragraphs [0159]-[0161]).

Consider claims 8, 9 and 10, Inoue in view of Kayada et al. disclose all the limitations as applied to claim 7 above and also disclose wherein the arbitration step gives priority to the image display (Paragraphs [0159]-[0163] of Kayada et al.), when normal processing in execution (sending a request) and image display in execution (sending a request) compete for use of the bus and when external input is recognized (Paragraphs [0044] and [0046] of Inoue , where Inoue discloses that the user enters keyboard input and video is still being displayed).

Consider claim 11, Inoue in view of Kayada et al. disclose all the limitations as applied to claim 7 above and also disclose wherein said variable synchronizing signal adjusting step slows down said variable synchronizing signals if said input supervisory step recognizes that there is no external input (request to use buses) for a certain period of time when the variable synchronizing signals are at high speed, and speeds up said variable synchronizing signals if said input supervisory step recognizes an external input (request to use buses) when said synchronizing signal is at low speed (Paragraphs [0159]-[0163] of Kayada et al. and paragraphs [0044]-[0046] of Inoue, where speed is increased or decreased depending on use).

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Turney et al. (US 5,949,812) disclose a method for conserving battery in a receiver by slowing/stopping the system clock during low demand.

Tam et al. (US 2003/0076183 A1) disclose an adaptive variable frequency clock system.

Fung (US 4,811,204) discloses a direct memory access and display system.

Dent et al. (US 5,598,575) disclose a multi-processor data memory sharing system using arbitration logic.

Bertram (US 6,011,546) discloses programming structure for display user interfaces.

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12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alejandro Rivero whose telephone number is (571) 272-2839. The examiner can normally be reached on 8:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung can be reached on (571) 272-7882. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AR

Nick Corsaro
NICK CORSARO
PRIMARY EXAMINER